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## PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

2000.056900/TT4089

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on November 11, 2008

Signature

Typed or printed name Jaison C. John

Application Number

10/047,188

Filed

01/15/2002

First Named Inventor

**Brian C. Barnes**

Art Unit

2135

Examiner

**Truong, Thanhnga B.**

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

 applicant/inventor. assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96) attorney or agent of record. **50,737**  
Registration number \_\_\_\_\_ attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

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**November 11, 2008**

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.  
Submit multiple forms if more than one signature is required, see below\*.

 \*Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:

BRIAN C. BARNES  
GEOFFREY S. STRONGIN  
RODNEY W. SCHMIDT  
Serial No.: 10/047,188

Filed: JANUARY 15, 2002

For: METHOD AND APPARATUS FOR MULTI-TABLE ACCESSING OF INPUT/OUTPUT DEVICES USING TARGET SECURITY

Group Art Unit: 2135

Examiner: Linh L.D. Son  
Conf. No.: 5070  
Atty. Docket: 2000.056900/TT4089

CUSTOMER NO.: 23720

**REMARKS CONCERNING PRE-APPEAL BRIEF REQUEST FOR REVIEW****MAIL STOP APPEAL BRIEF- PATENT**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Appellants submit the following remarks concerning the Pre-Appeal Brief Request for Review filed concurrently herewith. The following remarks show that there are clear errors in the Examiner's rejections. The Examiner rejected claims 1-3, 12-14 and 16 under 35 U.S.C. 103(a) as allegedly being anticipated by *Covey* (US Patent No. 4,926,476) and further in view of U.S. Patent No. 4,173,783 (*Couleur*). The Examiner imposed these rejections in the Final Office Action mailed June 11, 2008. The Examiner issued an Advisory Action on August 21, 2008, maintaining the rejection of the Final Office Action. The Examiner's statements in the Final Office Action mailed June 11, 2008, represent clear errors.

The combination of *Covey* and *Couleur* does not anticipate or make obvious all of the elements of the pending claims of the present application. In the Final Office Action dated June 11, 2008, the Examiner again, focuses on the argument relating to whether *Covey* discloses or make obvious the establishment of a security level to a software object. The Examiner, in the Final Office Action, asserts that *Covey* is directed to observing security behavior of untrusted software under test conditions and a trusted computing base (TCB) enforces security policy by enforcing constraints on accesses by certain entities. There are several flaws in the Examiner's

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reasoning. Firstly, the Examiner asserts that objects may be simply files, I/O devices, memory pages segments, etc.; however, the claims call for software objects with various non-limiting examples provided in the Specification.

Further, in the Final Office Action, the Examiner seems to support Applicant's arguments that the TCB imposes certain constraints that refer to the data and not the software objects themselves. As described in further detail below, **Covey** is directed to providing mechanisms to constrain untrusted software to read data from only certain sensitive levels and to write data at only certain sensitive levels. The sensitivity levels only relates directly to data and not to software objects. Therefore, regardless of the Examiner's assertion that **Covey**'s invention is to observe security behavior of untrusted software, it is abundantly clear that **Covey** does not disclose establishing a security level for a software object, but instead refers to sensitivity levels with respect to data.

Further, **Covey** provides indications that it is not referring to establishing security levels for software objects because it explicitly specifies that software need not be examined before it is permitted to handle multi-level security data. In other words, **Covey** is explicit in differentiating sensitivity levels being established with respect to data versus the actual software. Therefore, **Covey** simply fails to teach or make obvious the element of establishing the security level relating to a software object and **Couleur** does not make up for this deficit. Further, the Examiner argues in the Final Office Action that the RAM 60 in order to enforce different security policies at different times anticipates establishing a security level. In the Final Office Action, the Examiner deduces that the enforcement process performed by the RAM 60 equates to establishing security levels for a software object. However, the Examiner provides no evidence to support this assertion. As described herein, **Covey** simply does not disclose establishing a security policy relating to a software object, as described in further details below.

Moreover, in the Final Office Action, with regard to the argument that those skilled in the art would not combine *Covey* and *Couleur* in the manner provided in the claims, the Examiner responds by asserting that *Covey* and *Couleur* do not need to disclose anything over and above the invention as claimed to render it unpatentable or anticipated. However this assertion does not advance the Examiner's position in combining *Covey* and *Couleur*. The Examiner simply states that *Covey* teaches memory access, which is page memory, but *Covey* is silent on the capability of showing multi-table I/O space access. *Couleur*, on the other hand, teaches multi-table I/O space in the abstract, Figure 1. However, as described further below, the combination of *Covey* and *Couleur* simply would not make obvious all of the elements of the claims of the present invention. Further, there is no evidence that those skilled in the art would find motivation to combine them in the manner claimed. *Covey* is directed to memory access, an more particularly, page memory. In contrast, *Covey* is directed to execution of untrusted software.

As noted above, the combination of *Covey* and *Couleur* do not teach, disclose or make obvious all of the elements of claims of the present invention. For example, the Examiner asserts that *Covey* discloses or makes obvious the claim element of establishing a security level for a software object that is executed (see for example claim 1). The Examiner cites to section of *Covey* that discuss "sensitivity levels" to argue obviousness of the security level of the software object of claims of the present invention. However, the Examiner has misapplied the "sensitivity levels" disclosure of *Covey*. *Covey* discloses that it contains mechanisms to "constrain untrusted software to read data from only certain sensitivity levels and to write data at only certain other sensitivity levels" (emphasis added). See col. 3, lines 3-5; Abstract. The sensitivity level of *Covey* is related to the data and not to the software object. In contrast, claim 1 calls for "establishing a security level for said software object." Examiner analysis is clearly a misapplication of the prior art. *Covey* is explicitly clear that the sensitivity levels relates directly

to only data and not to software objects. In fact, **Covey** explicitly asserts that software need not be examined before it is permitted to handle multi-level security data. See Abstract. This is another clear indication that **Covey** is simply not directed to establishing security levels to software objects. Therefore, it is abundantly clear that **Covey** does not disclose or make obvious any type of establishment of a security level to a software object. Instead, **Covey** discloses assigning sensitivity level tags to calculate certain sensitivity levels related to stored data. See col. 5, lines 15-19. **Covey** explicitly indicates that calculation is made for operation results based upon how software relates to data from different classification or security levels. See col. 6, lines 8-10. Therefore, the calculation of sensitivity levels in **Covey** only relates to data and not to software objects. Accordingly, the element of establishing a security level for software object of claim 1 is not made obvious by **Covey** and, further, **Couleur** does not make up for this deficit.

Further, the Examiner makes conflicting assertions that undermines Examiner's arguments. First, the Examiner asserts that the multi-table input/output (I/O) space access is disclosed by **Covey**; and then, asserts that **Covey** is silent on the capability of showing the multi-table I/O space. See pages 2-3 of the Office Action dated 11/14/2007. Clearly, **Covey** does not disclose any type of a multi-table I/O space access. **Covey** discloses page tables that include page descriptors and labels, which are used to address the memory 70. However, the Examiner is, indeed, correct in indicating that **Covey** is clearly silent on the multi-table I/O space. Moreover, **Couleur** does not make up for this deficit.

The Examiner asserts that **Couleur** teaches a multi-table I/O space; however, this is clearly not the case. **Couleur** is directed to converting virtual addresses to absolute addresses using page tables. See Abstract of **Couleur**; col. 2, lines 20-29. However, **Couleur** is explicit in indicating that each peripheral that is connected to an I/O unit relates to a particular page table. In other words, even though several page tables are disclosed, multi-table memory access is not

disclosed or made obvious since each peripheral is associated with only one page table. There is clearly no disclosure of a multi-table I/O space. *See Abstract; col. 2, lines 20-29.* **Couleur** clearly indicates that each peripheral device connected to the I/O unit is associated with a page table in memory. *See col. 2, lines 20-23.* Those skilled in the art would not find obvious a multi-table I/O space based upon this disclosure. Further, even if *arguendo*, **Couleur** were to be combined with **Covey** in the manner alleged by the Examiner, as described above, another element, which relates to establishing a security level for the software object, is clearly not disclosed or made obvious by **Covey**, **Couleur**, or their combination.

Further, in making an obviousness rejection, it is necessary for the Examiner to identify the reason why a person of ordinary skill in the art would have combined the prior art references in the manner set forth in the claims. *KSR Int'l Co. v. Teleflex, Inc.*; at 14, No. 04-1350 (U.S. 2007). Applicants respectfully submit that the Examiner has not met this burden. If fact, as illustrated below, **Covey** and **Couleur** would not be combined in the manner set forth in the claims. Further, the Examiner has failed into identify why those skilled in the art would combine **Covey** and **Couleur**. Further, even if **Covey** and **Couleur** were combined, all elements of claims 1-3, 12-14 and 16 would not be taught or made obvious by this combination. Further, Applicants acknowledge and appreciate that the Examiner has allowed claims 8-11 and 17-20, and indicated that claims 4, 15, 5-7 contain allowable subject matter.

Respectfully submitted,  
WILLIAMS, MORGAN & AMERSON, P.C.  
CUSTOMER NO. 23720

Date: November 11, 2008

By: \_\_\_\_\_

  
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